APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/006,304	12/10/2001	Satoshi Misaka	HITA.0125	2783

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EXAMINER
TO, JENNIFER N

ART UNIT	PAPER NUMBER
2195	

DATE MAILED: 05/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

		Application No.	Applicant(s)
Office Action Summary		10/006,304	MISAKA ET AL.
		Examiner	Art Unit
		Jennifer N. To	2195

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _10 December 2001_.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is

    closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-10_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-10_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on _10 December 2001_ is/are: a)☐ accepted or b)☒ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☒ All   b)☐ Some * c)☐ None of:

    1.☒ Certified copies of the priority documents have been received.

    2.☐ Certified copies of the priority documents have been received in Application No. _____.

    3.☐ Copies of the certified copies of the priority documents have been received in this National Stage

        application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)	4) ☐ Interview Summary (PTO-413)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____.
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _12/10/01_.	5) ☐ Notice of Informal Patent Application (PTO-152)
	6) ☐ Other: _____.

DETAILED ACTION

1.   Claims 1-10 are presented for examination.

2.   It is noted that although the present application does contain line numbers in the specification and claims, the line numbers in the claims do not correspond to the preferred format. The preferred format is to number each line of every claim, with each claim beginning with line 1. For ease of reference by both the Examiner and Applicant all future correspondence should include the recommended line numbering.

3.   The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "201" in figure1, has been used to designate both CPU and device. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement-drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the examiner does not accept the changes, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

4.   The disclosure is objected to because of the following informalities: the phrase

"the <u>resister</u> 141 stores" (page 8, line 6) should be "the <u>register</u> 141 stores", and "in

execution speed<u>.</u>" (page 11, line 9) should be "in execution speed<u>.</u>". Applicant is

required to revise the entire specification.

Claim Objections

5.   Claim 1 is objected to because of the following informalities: "whereby <u>programs</u>

executed under said execution environments <u>includes</u>" should be "whereby <u>programs</u>

executed under said execution environments <u>include</u>". Appropriate correction is

required.

Claim Rejections - 35 USC § 101

6.   35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

7.   Claims 1-6 are rejected under 35 U.S.C. 101 because the claimed invention is

directed to non-statutory subject matter.

8.   Claims 1-6 are directed to method steps in which can be practiced mentally in

conjunction with pen and paper, therefore they are directed to non-statutory subject

matter. Specifically, as claimed, it is uncertain what performs each of the claimed

method steps. Moreover, <u>each of the claimed steps, inter alia,</u> (allocating, assigning,

compiling, and defining) can be practiced mentally in conjunction with pen and paper

that is not tied to a technological art, environment, or machine which would result in a

practical application producing a concrete, useful, tangible result to form the basis of

statutory subject matter under 35 U.S.C. 101. Therefore, the claimed invention is

directed to non-statutory subject matter. The claims should be amended to indicate a

computer implements the subject matter, i.e., a computer implemented method.

Claim Rejections - 35 USC § 112

9.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly
> claiming the subject matter in which the applicant regards as his invention.

10.   Claims 1-10 are rejected under 35 U.S.C. 112, second paragraph, as being

indefinite for failing to particularly point out and distinctly claim the subject matter which

applicant regards as the invention.

        a.   The following terms lack proper antecedent basis:

                i.   program executed – claims 1, 8, 9;

                ii.   the number of parameters – claims 2, 10;

                iii.   the number of reserved general purpose registers – claim 3;

                iv.   said parameters – claims 4, 5;

        b.   The claim language in the following claims is not clearly understood:

                v.   as per claims 1, 2, 8, 9, and 10, it is unclear and indefinite to what

                applicant refers as "environmental information".

vi.   as per claim 1, it is uncertain whether "a method for allocating data

to a plurality of general purpose register...execution environments

comprising " or "program executed under ...execution environment

comprising" (i.e. is it a method claim or a program product claim). Lines 2-

5, it is uncertain whether each set of execution environments have a first

and second program executed or a plurality of execution environments

include a first and second program within an execution environment. Line

4, it is unclear how "a second program unifying said plurality of execution

environments" (i.e. by utilizing the linker as described in fig. 1). Line 4, it is

uncertain whether "a user-specific function" refers as a function specified

by the user or a common function disclosed to the user in order to utilized

another function of the system. Line 6, it is not clearly understood what

meant by "environment information" (i.e. a task attribute value).

vii.   as per claim 5, it is uncertain what applicant meant by "multimedia

instruction".

viii.   as per claims 8, and 9, they are having the same deficiencies as

claim 1. Appropriate corrections are required.

c.   Lacking an essential element:

ix.   as per claim 8, even though the preamble recites a type of a

program product, but the rest of the claim does not support the preamble.

(i.e. lacking of a computer memory).

Claim Rejections - 35 USC § 102

11.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

12.   Claims 1, and 6-9 are rejected under 35 U.S.C. 102(b) as being anticipated by

applicant admitted as prior art in the specification hereafter (AAPA).

13.   As per claim 1, AAPA teaches a method for allocating data to a plurality of

general purpose registers in a CPU for a plurality of execution environments (figs. 6, 7,

9), whereby programs executed under said execution environments includes a first

program for implementing a user-specific function and a second program for unifying

said plurality of execution environments (fig. 7), comprising:

        allocating a data area in RAM for storing environmental information of said

second program (fig. 9, items 151, 152, 160);

        assigning one of said plurality of general purpose registers for storing a pointer of

the environmental information in the RAM (fig. 9, item 149; specification page 8, lines

11-13); and

        compiling the first program for at least one of said plurality of execution

environments (specification page 4, lines 12-13).

14.   As per claim 6, AAPA teaches method for allocating data to a plurality of general purpose registers in a CPU for a plurality of execution environments according to claim 1, whereby the first program is compiled simultaneously for at least two of said plurality of execution environments (specification, page 4, lines 12-17).

15.   As per claim 7, AAPA teaches a method for allocating data to a plurality of general purpose registers in a CPU for a plurality of execution environments according to claim 1, whereby the method is implemented by a computer (specification, page 3, lines 14-15).

16.   As per claim 8, it is a computer program product claim that corresponds to the method claim 1. Therefore, it is rejected for the same reason as claim 1 above.

17.   As per claim 9, it is an integrated circuit claim that corresponds to the method claim 1. Therefore, it is rejected for the same reason as claim 1 above.

Claim Rejections - 35 USC § 103

18.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

19.   Claims 2-5, and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable

over AAPA as applied in claims 1 and 9 above, in view of Amerson (U.S. Patent No.

5564031).

20.   As per claim 2, AAPA teaches the invention substantially as claimed in claim 1.

AAPA did not specifically teach the number of parameters defining the environmental

information is equal to or bigger than the number of general purpose registers.

21.   However, Amerson teaches the number of parameters defining the

environmental information is equal to or bigger than the number of general purpose

registers (col. 6, lines 28-30).

22.   It would have been obvious to one of an ordinary skill in the art at the time the

invention was made to have combined the teaching of AAPA and Amerson because

Amerson defining the number of parameters is equal to the number of general purpose

register would improve the efficiency of AAPA's system by increasing the density of

register usage (Amerson, col.2, line 54).

23.   As per claim 3, AAPA teaches the invention substantially as claimed in claim 1.

AAPA did not specifically teach the number of reserved general purpose registers is

equal to or bigger than the number of actually used general purpose registers.

24.   However, Amerson teaches the number of reserved general purpose registers is

equal to or bigger than the number of actually used general purpose registers (col. 7,

lines 37-53; col. 11, lines 37-39).

25.   It would have been obvious to one of an ordinary skill in the art at the time the

invention was made to have combined the teaching of AAPA and Amerson because

Amerson allocating the number of reserved general purpose register is equal to the

number of actual used general purpose register would improve the efficiency of AAPA's

system by increasing the density of register usage (Amerson, col.2, line 54).

26.   As per claim 4, AAPA teaches the invention substantially as claimed in claim 1.

AAPA did not specifically teach a step of defining arguments for passing information on

at least one task for implementing the first program, said arguments comprise:

        an address of a memory location for storing an identifier for controlling and

managing said task;

        a start address of an execution routine for implementing said task;

        a priority level assigned to said task to occupy the RAM; and a start address of a

memory area for storing a said parameters.

27.   However, Amerson teaches a step of defining arguments for passing information

on at least one task for implementing the first program (col. 6, lines 25-33), said

arguments comprise:

an address of a memory location for storing an identifier for controlling and managing said task (abstract, lines 14-15);

a start address of an execution routine for implementing said task (col. 13, lines 65-67; col. 14, lines 1-2);

a priority level assigned to said task to occupy the RAM (col. 6, lines 56-61; col. 7, lines 15-30); and

a start address of a memory area for storing a said parameters (col. 14, lines 53-58).

28.   It would have been obvious to one of an ordinary skill in the art at the time the invention was made to have combined the teaching of AAPA and Amerson because Amerson allocating data to a plurality of general purpose register would improve the throughput of AAPA's system by shortening execution time and efficiency use of registers (Amerson, col. 3, lines 14-15).

29.   As per claim 5, Amerson teaches a stack base pointer which points to a location in said stack when said task is activated (col. 7, lines 62-67; col. 8, lines 4-8).

30.   As per claim 10, it is an integrated circuit claim that corresponds to the method claim 2. Therefore, it is rejected for the same reason as claim 2 above.

Conclusion

31.   The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

   Tanaka (U.S. Patent No. 4733346)

   Case (U.S. Patent No. 4777588)

   Hobbs (U.S. Patent No. 5197138)

   Davis (U.S. Patent No. 4047161)

   Alpern (U.S. patent No. 6651248)

   Mak (U.S. Patent No. 5960212)

   Francone (U.S. Patent No. 6493686)

32.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennifer N. To whose telephone number is (571) 272-7212. The examiner can normally be reached on M-T 7AM-4:30 PM, F 7AM-3:30 PM.
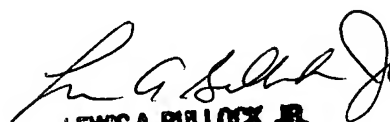
   If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be reached on (571) 272-3756. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

   Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

Jennifer N To
Examiner
Art Unit 2195

LEWIS A. BULLOCK, JR.
PRIMARY EXAMINER